# Complete Burkert system using Type 2702 with SideControl 1067 8630

### 2/2-way Angle Seat Control Valve, threaded and weld end connections, DN 13-50

- Excellent control characteristic and high flow rates
- · Durable, robust and cost effective
- Ultra compact design, low weight
- · Quality certifications available

Type 2702 can be combined with...



Type 8630	
Positioner	
TopControl	
continuous	

Type 1067
Positioner
SideControl

Type 8635 Positioner SideControl

Type 8323
Pressure transmitter

Type 8030 Flow sensor

**Type ST20**Temperature

sensor

The 2702 Control Valve consists of an 316L angle seat body with a rugged pneumatic piston actuator.

The parabolic trim results in a flow characteristic approximately 35% larger than conventional control valves. It is available in either stainless steel on stainless steel or with a durable PTFE seal for tight shut-off.

Type 2702 can be actuated by the Continuous TopControl Type 8630 or SideControl Type 1067 and 8635. TopControl/SideControl thus forms a mechanical and functional unit with the pneumatic actuator as a complete control valve system.

This system has been engineered for reliable accurate control in applications where high flow rate is an advantage.

#### **Proven Applications**

- Food and beverage CIP/SIP and auxiliary processes with steam, chilled water and glycol
- Textile machinery (steam, water, air) and dyeing
- · Heat exchangers and autoclaves
- Sterilizers and washers
- · Distillation apparatus
- · Packaging and filling machinery

Technical data								
Materials								
Body	Cast stainless steel 316L (conform to 1.4409)							
Actuator	PA (polyamide) (PPS on request)							
Sealing	SS/SS (stainless steel/stainless steel)							
	PTFE/SS (PTFE/stainless steel)							
Seat leakage IEC 534-4/	Shut-off class IV for St.st./St.st.							
EN 1349	Shut-off class VI for PTFE/St.st.							
Process media gases and	For neutral gases, water, alcohols, oils, fuels,							
liquids (vacuum version on request)	hydraulic liquids, salt solutions, lyes, organic solvents,							
	steam (10 bar(abs)/+180°C)							
Viscosity	Max. 600 mm²/s							
Packing gland	PTFE V-rings (silicone grease) with spring compensation							
Nominal pressure	PN 25 (body)							
Temperatures								
Fluid	-10°C to +180°C¹) (max. +130°C for PTFE/St.st. sealing recommended)							
Ambient	-10°C to +60°C¹)							
Control media	Compressed air							
Pilot pressure	5.5 to 7 bar							
Pilot air ports	G 1/4 stainless steel (SS)							
Flow direction	Below seat							
Mounting position	Any, preferably upright							
Flow characteristic	Modified equal percentage							
Control ratio (Kvs/KvO)	More than 50:1							
Port connections								
Threaded G	DIN ISO 228							
	face-to-face DIN 3202-4 M4 (on request)							
	face-to-face DIN 3202-4 M8							
NPT	ANSI/ASME B1.20.1							
_	face-to-face DIN 3202-4 M4							
Rc	ISO 7							
	face-to-face DIN 3202-4 M4							
Weld end ISO	ISO 4200							
DIN	DIN 11850 series 2							
SMS	SMS 3008 (on request)							
O D-Tube	BS 4821 part 1 (on request)							
	ASME BPE (on request)							

<sup>1)</sup> high temperature version on request

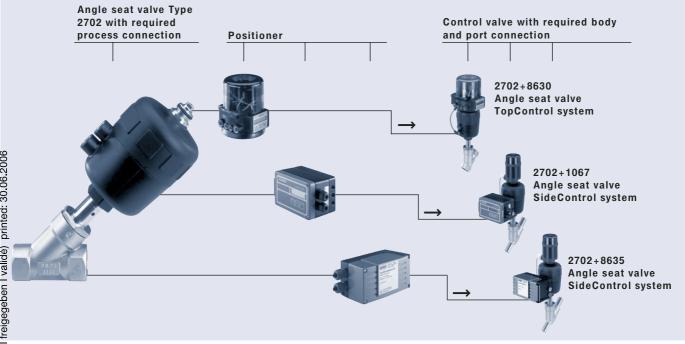


#### Angle seat valve system

A complete continuous angle seat valve system consists of an angle seat control valve Type 2702 and a valve actuation system SideControl Type 1067 or Type 8635 or TopControl Type 8630. The positioners are only delivered in combination with an actuator as a part of a complete control valve. The following information is necessary for the selection of a complete control valve:

- Item no. of the seat control valve Type 2702 (see Ordering chart)
- Item no. of the desired positioner Type 8630, 1067 or 8635 (see separate datasheets)

#### Examples for variations of continuous angle seat valve systems



#### Valve actuation system: TopControl Type 8630



0/4-20 mA

Device**Net** TM

The Type 8630 is a digital electropneumatic positioner to be combined with pneumatically actuated process valves. Its compact design with an integrated position encoder and digital text display was designed for the growing requirements of industrial applications. Signal processing, regulation, and control of the internal positioning system are done using microprocessor-controlled electronics. Thanks to its easy-to-use operating structure, the positioner is simple and easy to operate despite its wide range of functionality.

#### Important features:

- · Automatic commissioning of the control valve system and the optional process controller using the functions X-Tune or P.Co-Tune
- · Automatic or manual definition of correction characteristic curves
- · Binary inputs and outputs
- · Analog output
- · Fit seamlessly to Bükert process valve systems
- 24VDC 3-wire

#### Valve actuation system: SideControl Type 8635, 2-wire, intrinsically safe



4-20 mA







The Type 8635 is a digital electropneumatic positioner to be combined with pneumatically actuated process valves. Its robust, compact design was designed for the growing requirements of the process technology

Signal processing, regulation, and control of the internal positioning system are done using microprocessor-controlled electronics. Thanks to its easy-to-use operating structure, the positioner is simple and easy to operate despite its wide range of functionality.

#### Important features:

- Automatic commissioning of the control valve system and the optional process controller using the functions X-Tune or P.Co-Tune
- · Automatic or manual definition of correction characteristic curves
- · Binary inputs and outputs
- · Analog output
- · Mounting on variable acting valves according to DIN IEC 534-6 (NAMUR) and Bürkert process control valves
- 2-wire, power supply through setpoint or PROFIBUS PA
- ATEX certification

II 2G EEx ia IIC T6 Zone 1 II  $3\,G/D$  EEx ia IIC T6 Zone 2/22

· Robust housing of hardcoated and plastic plated aluminum

#### Valve actuation system: SideControl Type 1067



0/4-20 mA

The Type 1067 is a digital electropneumatic positioner to be combined with pneumatically actuated process valves. Its robust, very compact design was designed for the growing requirements of the process technology

Signal processing, regulation, and control of the internal or external positioning system are done using microprocessor-controlled electronics. Thanks to its easy-to-use operating structure, the position is simple and easy to operate despite its wide range of functionality.

#### Important features:

- · Automatic commissioning of the control valve system using the X-Tune functions
- · Automatic or manual definition of correction characteristic curves.
- Binary inputs and outputs
- · Analog output
- · Mounting on variable acting valves according to DIN IEC 534-6 (NAMUR) and Bürkert process control valves
- 3-wire, 24 VDC
- · Keypad/display unit
- · Remote version with positioner separate from control valve

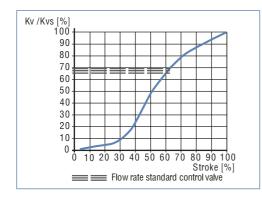


#### **Application example**



A 2702 control valve with a 1067 local PID controller. The valve is controlling the exit temperature of a media flowing-through a heat exchanger. The process input is a simple temperature transmitter.

#### Flow characteristic



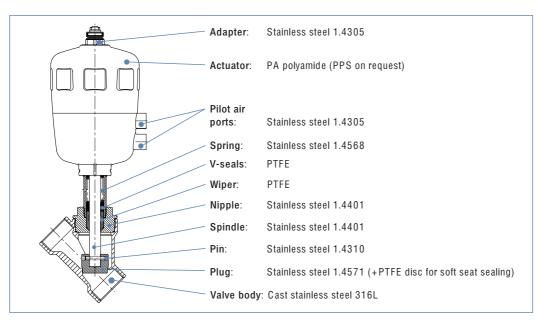
#### Remarks on the flow characteristic

Modified equi-percentile flow characteristic, engineered for a quick response during peak flow demand (an advantage for many processes like heating/cooling with heat exchangers) and fine control at lower flow.

#### Kv values [m³/h]

Port size and	Actuator		Stroke [%]										
orifice [mm]	size [mm]	5	10	20	30	40	50	60	70	80	90	100	
13/15	F-80	0.23	0.24	0.26	0.35	0.7	1.85	2.9	3.5	4	4.3	4.5	
20	F-80	0.30	0.33	0.42	0.7	2.85	5.3	6.6	7.5	8.2	8.6	9	
25	F-80	0.39	0.41	0.60	1.25	4.5	8.5	10.5	12.2	13.5	14.2	15	
32	F-80	0.55	0.65	0.95	1.5	4	9.3	13.8	16.5	18.8	21	23	
40	G-100	0.65	0.85	1.5	5	14	20	25	27	30	33	35	
50	G-100	1	1.3	2	5	16	27	34	41	45	49	53	

#### **Materials**



#### Ordering chart: Angle seat valve (without positioner)

#### Threaded port



	Dout 6	izo					
_ c	Port s		-	ne	Op. pressure ≤ +180°C [bar]	. *	Item no. seal system* PTFE/SS
tro			uat o Ø	valı h]	ssu 180	n ng l tem tem	tem no. seal system* PTFE/S\$
Control function	mm]	[inch]	Actuator size Ø [mm]	Kvs value [m³/h]	0p. pres9 ≤ +1{ [bar]	Item no. seal system* SS/SS	Item no. seal system* PTFE/SS
Threaded ports a							
flow below seat,	on rec					(	,,
<b>A</b>	13	1/2"	F-80	4.5	16	•	-
	20	3/4"	F-80	9	16	_	-
<b>≁</b> ∐	25	1"	F-80	15	16		-
2/2-way, NC by	32	1 1/4"	F-80	23	15		
spring return	40 50	1 1/2"	G-100 G-100	35 53	12.5 7.2	-	
_							
<b>B</b>	13	1/2"	F-80	4.5	16		
	20	3/4"	F-80	9	16 16		-
<b>≠</b>	32		F-80	15 23	15	-	-
2/2-way, NO by	40	1 1/4"	F-80 G-100	35	12.5	-	
spring return	50	2"	G-100	53	7.2	_	
, ,							
Threaded ports a flow below seat	cc. G,	אות ואנע	228, face-t	o-tace acc.	DIN 3202-4	IVI 8 (Short d	imension),
<b>A</b> A	13	1/2"	F-80	4.5	16	165 523	165 486
<u> </u>	20	3/4"	F-80	9	16	165 526	165 489
<b>≁</b> ∐	25	1"	F-80	15	16	165 531	165 513
2/2-way, NC by	32	1 1/4"	F-80	23	15	165 537	165 515
spring return	40	1 1/2"	G-100	35	12.5	165 540	165 518
В	13	1/2"	F-80	4.5	16	165 580	165 546
<del>_</del>	20	3/4"	F-80	9	16	165 584	165 549
<b>≁  </b>	25	1"	F-80	15	16	165 566	165 553
2/2-way, NO by	32	1 1/4"	F-80	23	15	165 569	165 557
spring return	40	1 1/2"	G-100	35	12.5	165 592	165 572
Threaded ports a flow below seat	cc. NP	T, ANSI	/ASME B1.2	20.1, face-to	-face acc. D	IN 3202-4 N	14,
A	13	1/2"	F-80	4.5	16	462 101	462 095
A	20	3/4"	F-80	9	16	462 102	462 096
<b>≠</b>	25	1"	F-80	15	16	462 103	462 097
P	32	1 1/4"	F-80	23	15	462 104	462 098
2/2-way, NC by	40	1 1/2"	G-100	35	12.5	462 105	462 099
spring return	50	2"	G-100	53	7.2	462 106	462 100
В	13	1/2"	F-80	4.5	16	462 115	462 107
В	20	3/4"	F-80	9	16	462 116	462 108
± 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	25	1"	F-80	15	16	462 110	462 111
P	32	1 1/4"	F-80	23	15	462 121	462 112
2/2-way, NO by	40	1 1/2"	G-100	35	12.5	462 122	462 113
spring return	50	2"	G-100	53	7.2	462 123	462 114
Threaded ports a	cc. Rc	ISO 7,	face-to-fac	e acc. DIN 3	202-4 M4, fl	ow below s	eat
<b>A</b> A	13	1/2"	F-80	4.5	16	507 147	507 141
T Î	20	3/4"	F-80	9	16	507 148	507 142
<b>≠</b> ∐	25	1"	F-80	15	16	507 149	507 143
P Q/Q way NC by	32	1 1/4"	F-80	23	15	507 150	507 144
2/2-way, NC by spring return	40	1 1/2"	G-100	35	12.5	507 151	507 145
opinig rotuin	50	2"	G-100	53	7.2	507 152	507 146
<b>B</b>	13	1/2"	F-80	4.5	16	507 165	507 153
T	20	3/4"	F-80	9	16	507 166	507 154
<del></del>	25	1"	F-80	15	16	507 155	507 161
P	32	1 1/4"	F-80	23	15	507 156	507 162
2/2-way, NO by	40	1 1/2"	G-100	35	12.5	507 157	507 163
spring return	50	2"	G-100	53	7.2	507 158	507 164



<sup>\*</sup>seal system:

• St.st./St.st.: plug stainless steel/seat stainless steel

• PTFE/St.st.: plug PTFE/seat stainless steel

<sup>■</sup> on request

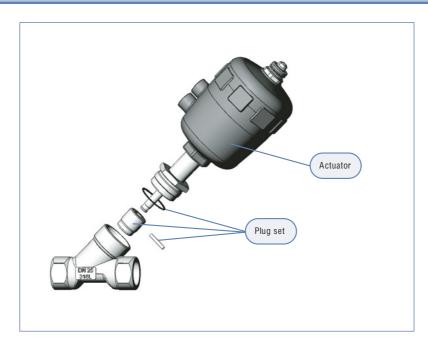
#### Ordering chart: Angle seat valve (without positioner)

#### Weld end



Control	Port size and orifice E E E SE		Connection DS x WS [mm]	Actuator size [mm]	Kvs value [m³/h]	Op. pressure ≤+180°C [bar]	Item no. seal system* SS/SS	Item no. seal system* PTFE/SS
Weld end acc. IS	0 4200	), flow b	elow seat					
Α	15	1/2"	21.3 x 1.6	F-80	4.5	16	165 524	165 487
A	20	3/4"	26.9 x 1.6	F-80	9	16	165 529	165 511
1 T W	25	1"	33.7 x 2.0	F-80	15	16	165 534	165 514
P	32	1 1/4"	42.4 x 2.0	F-80	23	15	165 538	165 516
2/2-way, NC by	40	1 1/2"	48.3 x 2.0	G-100	35	12.5	165 541	165 519
spring return	50	2"	60.3 x 2.0	G-100	53	7.2	165 544	165 521
В	15	1/2"	21.3 x 1.6	F-80	4.5	16	165 582	165 547
B	20	3/4"	26.9 x 1.6	F-80	9	16	165 585	165 551
<b>≠</b>	25	1"	33.7 x 2.0	F-80	15	16	165 567	165 554
Р	32	1 1/4"	42.4 x 2.0	F-80	23	15	165 570	165 559
2/2-way, NO by	40	1 1/2"	48.3 x 2.0	G-100	35	12.5	165 596	165 573
spring return	50	2"	60.3 x 2.0	G-100	53	7.2	165 599	165 578
Weld end acc. DI	N 1185	0 serie	s 2, flow bel	ow seat				
Α	15	1/2"	19.0 x 1.5	F-80	4.5	16	165 525	165 488
A	20	3/4"	23.0 x 1.5	F-80	9	16	165 530	165 512
<b>≠</b>	25	1"	29.0 x 1.5	F-80	15	16	165 536	165 030
P	32	1 1/4"	35.0 x 1.5	F-80	23	15	165 539	165 517
2/2-way, NC by	40	1 1/2"	41.0 x 1.5	G-100	35	12.5	165 542	164 778
spring return	50	2"	53.0 x 1.5	G-100	53	7.2	165 545	165 522
В	15	1/2"	19.0 x 1.5	F-80	4.5	16	165 583	165 548
B	20	3/4"	23.0 x 1.5	F-80	9	16	165 586	165 552
<b>≠</b>	25	1"	29.0 x 1.5	F-80	15	16	165 568	165 556
P	32	1 1/4"	35.0 x 1.5	F-80	23	15	165 591	165 571
2/2-way, NO by	40	1 1/2"	41.0 x 1.5	G-100	35	12.5	165 597	165 574
spring return	50	2"	53.0 x 1.5	G-100	53	7.2	165 600	165 579

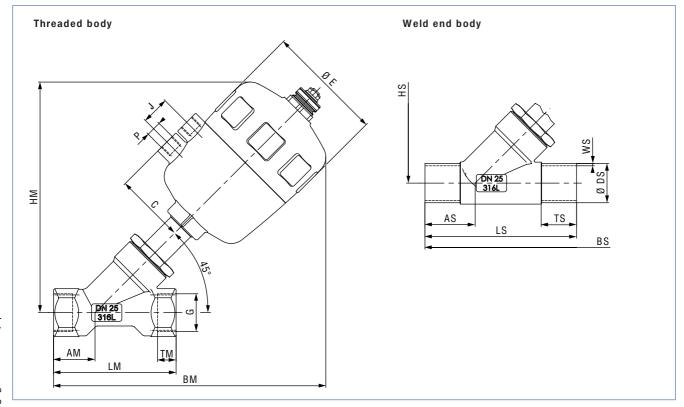
#### Spare parts for Type 2702 - DN 13-50 (on request)



St.st./St.st.: plug stainless steel/seat stainless steel
 PTFE/St.st.: plug PTFE/seat stainless steel

#### Dimensions [mm]

#### Angle seat valve with threaded and weld end connection



#### All actuators

Orifice [mm]	Actuator size	Ø E	С	Р	J
13/15	F-80	101	60	G 1/4	24
20	F-80	101	60	G 1/4	24
25	F-80	101	60	G 1/4	24
32	F-80	101	60	G 1/4	24
40	G-100	127	73	G 1/4	30
50	G-100	127	73	G 1/4	30

#### Threaded ends

All thre bodies	aded	G, NPT	G, NPT and Rc thread with face-to-face acc. DIN 3202-4 M4										G thread with face-to-face acc. DIN 3202-4 M8					
Orifice		G thread NPT thread Rc thread		d														
[mm]	HM	BM	LM	AM	G	TM	G	TM	G	TM	BM	LM	AM	G	TM			
13	193	224	85	31	G 1/2	14	NPT 1/2	13.7	Rc 1/2	13.2	217	65	24	G 1/2	14			
20	193	228	95	35	G 3/4	16	NPT 3/4	14	Rc 3/4	14.5	220	75	27	G 3/4	16			
25	198	234	105	35.5	G 1	18	NPT 1	16.8	Rc 1	16.8	228	90	29.5	G 1	18			
32	205	246	120	41	G 11/4	16	NPT 1 1/4	17.3	Rc 1 1/4	19.1	241	110	36	G 1 1/4	16			
40	260	300	130	40	G 11/2	18	NPT 1 1/2		Rc 1 1/2	19.1	295	120	35	G 1 1/2	18			
50	272	317	150	45	G 2	24	NPT 2	17.6	Rc 2	23.4	-	-	-	-	-			

#### Weld ends

	All weld end bodies ISO 4200 and DIN 11850 series 2									BS 4825 P1, ASME BPE, SMS 3008											
Orifice	:				ISO 4	1200		DIN 1	1850	S2	Orifice				BS 48	25 P1	, ASM	E BPE	SMS	3008	
[mm]	HS	BS	LS	AS	øDS	TS	WS	øDS	TS	WS	[inch]	BS	LS	AS	øDS	TS	WS <sup>1)</sup>	WS <sup>2)</sup>	øDS	TS	WS
15	198	232	100	34	21.3	20	1.6	19	20	1.5	1/2"	244	135	46	12.7	38	1.2	1.65	12	38	1
20	198	237	115	39	26.9	25	1.6	23	20	1.5	3/4"	250	145	52	19.05	38	1.2	1.65	18	38	1
25	199	242	130	43	33.7	30	2	29	26	1.5	1"	250	152	51	25.4	38	1.65	1.65	25	38	1.2
32	209	244	145	35	42.4	26	2	35	26	1.5	-	-	-	-	-	-	-	-	-	-	-
40	263	312	160	49	48.3	30	2	41	26	1.5	1 1/2"	323	182	60	38.1	38	1.65	1.65	38	38	1.2
50	277	327	175	50	60.3	30	2.6	53	26	1.5	2"	341	210	64	50.8	45	1.65	1.65	51	45	1.2

<sup>1)</sup> BS 4825 P1 2) ASME BPE



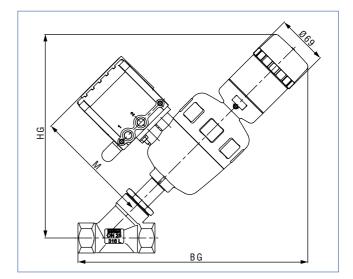
#### Dimensions [mm]

#### Control valve system 2702 + 1067

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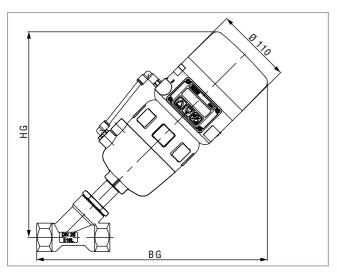
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#### Control valve system 2702 + 8635



				Threade HG	d body BG	Weld end body HG BG				
All bodies orifice [mm]	Actuator size [mm]	M 2702 - 1067	+ 8635		G, NPT and Rc thread with face-to-face acc. DIN 3202-4 M4	G thread with face-to-face acc. DIN 3202-4 M8		ISO 4200 DIN 11850 S2	BS 4825 P1 ASME BPE SMS 3008	
13/15	F-80	142	160	273	304	297	278	312	324	
20	F-80	142	160	273	308	300	278	317	330	
25	F-80	142	160	278	314	308	279	322	330	
32	F-80	142	160	285	326	321	289	324	-	
40	G-100	155	173	336	376	371	340	389	400	
50	G-100	155	173	349	394	-	354	404	418	

#### Control valve system 2702 + 8630



		Threade	d body		Weld end body					
All bodies orifice [mm]	Actuator size [mm]	HG	BG G, NPT and Rc thread with face-to-face acc. DIN 3202-4 M4	G thread with face-to-face acc. DIN 3202-4 M8	HG	BG ISO 4200 DIN 11850 S2	BS 4825 P1 ASME BPE SMS 3008			
13/15	F-80	291	322	315	296	330	342			
20	F-80	291	326	318	296	335	348			
25	F-80	296	332	326	297	340	348			
32	F-80	303	344	339	307	342	-			
40	G-100	354	394	389	358	407	418			
50	G-100	367	412	-	372	422	436			

#### Please note

This is an "on-line" form, i.e. you can fill out the form directly in the pdf document before you print it out

#### Control valves - request for quotation

#### Please fill out and send to your nearest Burkert facility\* with your inquiry or order

Company	• • • •				Contact	person		<u> </u>		
Customer No					Departm	ent				
Address					Tel./Fax					
Postcode/Town					E-mail					
= mandato	ry fields to fill out		[		Quantity			F	Required del	ivery date
Operating da	ta									
Site of control										
Measuring and	d control task									
Pipeline		DN			F	N				
Pipe material										
Process medi			1.1							
Type of media			Liquid Min		Star	Ste idard	eam	Max	☐ Ga	s nit
Flow rate (Q, (	Qn, W) 1)		IVIIII			ιααια		IVIUX		
Temperature a	it valve inlet T1									
Absolute pres	sure at valve inlet P1									
	sure at valve outlet P2									
Steam pressu										
Kinematic visc	, ,				mm²/s or					
Dynamic visco					mPa.s or	СР				
Standard dens	•				Kg/m³ dB(A)			1) standard un		
	<u> </u>				ub (A)			Liquid Q = m <sup>3</sup>	³/h; Steam W = Kç	g/h; Gas Qn = Nm³/h
Valve feature	S									
Control valve t	type		Globe	A	ngle seat	Diaphra	ıgm 🗌	Ball valve	Butterfly	Other
Body material			Stainles	s Steel		PVC		PP	PVDF	Other
Surface finish	2)					internal				external
Seat sealing n	naterial		Metal	P	TFE	EPDM <sup>2)</sup>		FPM <sup>2)</sup>		
Nominal press	sure	PN								
Nominal size		DN								
Type of conne	ction		Flange	S	ocket union	Welded		Int. thread	Ext. thread	Tri- C lamp®
Standard conr	nection		IS O	D	IN	ANSI		JIS	Other	
Function			NC	N	0	Double-	-acting	I		
Pilot pressure						min.				max.
2)Only diaphragm va										
Positioner /			T 04	200 0	I.u.a			T 000	F. 0	
Type 106			type 80	<b>630</b> - 3 w	ire				5 - 2 wire	
Valve mo	unted Remote versio		_					Stand		Ex ia
Power su	pply 24 VDC		Power	supply 2	4 VDC			Power su	pply 24 VDC \	ia setpoint or BUS
Commun	ication			unication				Commun		
Setpoint/	output analog signal		Setpoir or via B		analog sig			Setpoint/ or via BU	output analog	ı signal ofibus PA
			or via b	08	Device			or via bu	S Ha	
Positione	r version		Positio	ner versi		,		Positione	er version	
Input	0/4 - 20 mA / 0-10 V		Input			/ 0 - 5/10 V		Input	4 - 20 n	
Output	4 - 20mA		Output		4 - 20			Output		- 20mA
	or Binary				or/and Binary					and narv
PID Contr	oller version <sup>3)</sup>		PID Controller ve					PID Controller version <sup>3)</sup>		•
Input mea	suring signal 4 - 20 mA		Input measuring si				'	Input measuring signal		
		اما	4 - 20 1	nA / Pt10	00 / Freque		,	4 - 20 m/		h
3) same setpoint for Ir	put and Output signal as for Positione	r version	uctive	proximity	SWITCH	12	2	mauctive pr	oximity switc	h12
	nearest Bürkert facility,					ww.burke	rt.co	m		
	cial application conditions			Wa noo	amia tha nia	ht to make t	taabala	and and	0507//	n Fll-an NN8010

please consult for advice.

changes without notice.